

Appl. No. 09/778,004
Amdt. Dated July 21, 2005
Reply to Office action of May 23, 2005
Attorney Docket No. P13236-US2
EUS/J/P/05-3162

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 -27. (Canceled)

28. (New) A method for managing resource services between terminals in communication networks, the method comprising the steps of:

sending a resource reservation request, for service between a service client terminal and one or more terminals, to a service broker (SB) in an access network, wherein each terminal is a wireless or a wired terminal and each terminal is a fixed or a mobile terminal;

upon receiving the resource reservation request in advance of, or at the time of, the need for the resource,

the service broker providing wireless service for a specific geographic area by identifying the most suitable access technology out of all possible available access technologies to provide the requested service;

responsive to the reservation request, the SB setting up reservations for the requested service by

communicating with a geographic domain server (GDS) to determine the geographic location corresponding to the requested resource service;

communicating with a radio bearer broker (RBB) coupled to an access network associated with each terminal to determine whether there is sufficient resources available and to gain admission to each associated access network;

communicating with a bandwidth broker (BB) to determine whether there are sufficient resources for the requested service in the BB's routing domain, and to make an advance resource reservation; and

allocating the requested resources to the service client terminal and the one or more terminals.

Appl. No. 09/778,004
Amdt. Dated July 21, 2005
Reply to Office action of May 23, 2005
Attorney Docket No. P13236-US2
EUS/J/P/05-3162

29. (New) The method of claim 28, wherein responsive to a request for specific quality of service (QoS) the service broker

determining a suitable access network by querying the geographic domain server, the one or more radio bearer brokers and the bandwidth broker to set up the reservation.

30. (New) The method of claim 28, wherein the service broker acts as a gateway for the service client terminal to entities in the communication networks, comprising the GDS, the RBB and the BB, that are utilized for guaranteeing the requested resource reservation.

31. (New) The method of claim 28, wherein bandwidth brokers are implemented in the Internet backbone.

32. (New) The method of claim 28, wherein the radio bearer broker is adapted for handling service requirements of various types of traffic communicated over a radio access interface in the access network.

33. (New) The method of claim 28, wherein the access network is a wired network.

34. (New) The method of claim 28, wherein the access network is a wireless network.

35. (New) The method of claim 28, wherein a network node, or nodes, each implement a radio bearer in each access network according to the needs of the specific access network.

Appl. No. 09/778,004
Amdt. Dated July 21, 2005
Reply to Office action of May 23, 2005
Attorney Docket No. P13236-US2
EUS/J/P/05-3162

36. (New) The method of claim 28, wherein the reservation request is sent to the service broker by a terminal other than the service client terminal and the reservation request is for a geographic location that is the same as the geographic location of the service client terminal or is different from the location of the service client terminal.

37. (New) The method of claim 28, further comprising the steps of:
sending a guaranteed reservation request via a first network and
sending a non-guaranteed reservation request via an overlapping network having a different access technology.

38. (New) The method of claim 37, further comprising the step of:
determining that the guaranteed reservation is denied in the first network and
utilizing the reservation request in the overlapping network.

39. (New) The method of claim 28, wherein the service broker associated with a first network operator is adapted to contact a service broker associated with another network operator to determine if resources are available to enable the resource reservation request.

40. (New) An apparatus for managing resource services between terminals in communication networks, the apparatus comprising:

a service broker (SB) in an access network adapted for receiving a resource reservation request for service between a service client terminal and one or more terminals, wherein each terminal is a wireless or a wired terminal and each terminal is a fixed or a mobile terminal;

the service broker, upon receiving the resource reservation request in advance of, or at the time of, the need for the resource, providing wireless service for a specific geographic area by identifying the most suitable access technology out of all possible

Appl. No. 09/778,004
Amdt. Dated July 21, 2005
Reply to Office action of May 23, 2005
Attorney Docket No. P13236-US2
EUS/JP/05-3162

available access technologies to provide the requested service and setting up reservations for the requested service by

communicating with a geographic domain server (GDS) to determine the geographic location corresponding to the requested resource service;

communicating with a radio bearer broker (RBB) coupled to an access network associated with each terminal to determine whether there is sufficient resources available and to gain admission to each associated access network;

communicating with a bandwidth broker (BB) to determine whether there are sufficient resources for the requested service in the BB's routing domain, and to make an advance resource reservation; and

the service broker adapted to allocate the requested resources to the service client terminal and the one or more terminals.

41. (New) The apparatus of claim 40, wherein the SB is further adapted for choosing a suitable access network having a requested quality of service according to information received from the geographic domain server, the one or more radio bearer brokers and the bandwidth broker.

42. (New) The apparatus of claim 41, wherein the service broker acts as a gateway for the service client terminal to entities in the communication networks, comprising the GDS, the RBB and the BB, that are utilized for guaranteeing the requested resource reservation.

43. (New) The apparatus of claim 41, wherein the bandwidth broker is implemented in the Internet backbone and operates in an heuristic mode for advance resource reservations.

44. (New) The apparatus of claim 41, wherein the radio bearer broker is adapted to handle service requirements of various types of traffic communicated over a radio access interface in the access network.

Appl. No. 09/778,004
Amdt. Dated July 21, 2005
Reply to Office action of May 23, 2005
Attorney Docket No. P13236-US2
EUS/J/P/05-3162

45. (New) The apparatus of claim 41, wherein the access network is a wired network.

46. (New) The apparatus of claim 41, wherein the access network is a wireless network.

47. (New) The apparatus of claim 41, wherein the radio bearer broker is implemented in a network node or nodes in each access network according to the needs of the specific access network.

48. (New) The apparatus of claim 41, wherein the service broker is further adapted to handle a resource reservation from a terminal other than the service client terminal, wherein the reservation request is for a geographic location that is the same as the geographic location of the service client or is different from the location of the service client.

49. (New) The apparatus of claim 41, further comprising:
means for sending a guaranteed reservation request via a first network and for sending a non-guaranteed reservation request via an overlapping network having a different access technology.

50. (New) The apparatus of claim 49, further comprising the step of
means for utilizing the non-guaranteed reservation request in the overlapping network upon determination that the guaranteed reservation is denied in the first network.

51. (New) The apparatus of claim 40, wherein the service broker associated with a first network operator is adapted to contact a service broker associated with

Appl. No. 09/778,004
Amtd. Dated July 21, 2005
Reply to Office action of May 23, 2005
Attorney Docket No. P13236-US2
EUS/J/P/05-3162

another network operator to determine if resources are available in the another network to enable the resource reservation request.